Warranty Information

Uplink guarantees this product for 12 months from the date of manufacturing. If a unit should be defective within the warranty period; it should be returned to the dealer from whom it was purchased. The unit then will be repaired or replaced at no charge. The warranty is limited to replacement cost of the unit. No warranty is expressed or implied on equipment used with unit or labor involved.

Liability Wavier

Uplink will not be held responsible for damage or defect caused by improper installation, failure to follow installation guidelines, deliberate misuse, careless handling, or acts of God No guarantee of performance other than that expressed in approved Uplink literature is authorized. Use not consistent with standard security and fire protection protocol voids warranty and all guarantees related to product pricing and performance. Manual is subject to change without notice.

Technical Support

- Technical Support is available Monday through Friday 8:00am to 8:00pm excluding Holidays.
- Before seeking technical support please ensure you have read the instructions completely.
- Technical support will need a dealer Id or login and the serial number of the unit to assist you.
- Request for deactivation of units, profile changes and adding of technicians should be faxed to the technical support fax line and will be processed within 24 hours.

UPLINK Technical Support
1600 Parkwood Circle
Atlanta, GA 30339
1-888-9Uplink
Fax 770-693-3501
For Customer Support
Call 1-888-987-5465

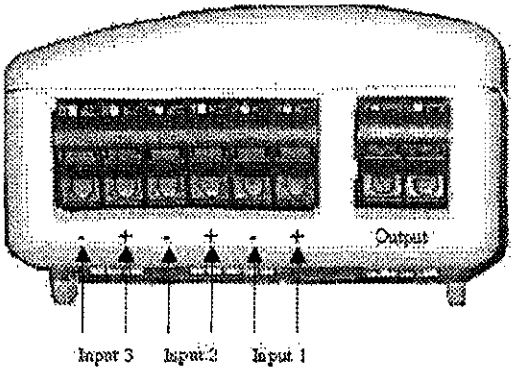
Description of the Unit

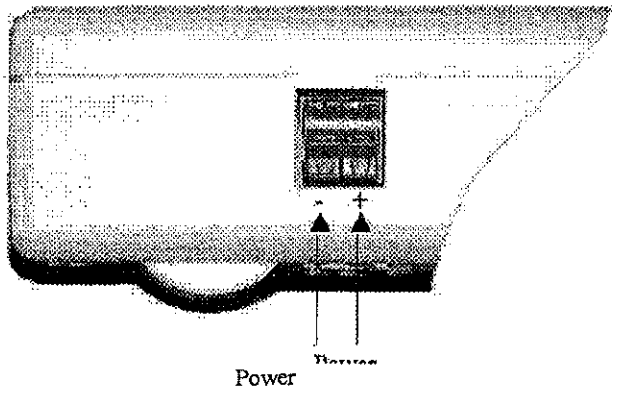
The Uplink Digicell 1500 is a multipurpose FCC certified Cellemetry Data Service Device capable of sending and receiving data over the AMPS Cellular Control Channel Network. The 1500 is powered using 12 VDC and has a full 3W transmitter with receiver sensitivity to –115dBm. The transmit frequency range of the Unit is 833.43-834.66 MHz and the receive frequency range is 878.43-879.66 MHz. The unit typically uses a quarter wave antenna with a frequency range of 824-896 MHz. The 1500 has 3 discrete inputs that can be configured as Voltage, Open Collector, Bell Trip, or Siren Trip . The unit has pulse counter which can be set to report every 12 hours or read on demand.

Getting Started

1. The 1500 must first be activated from the Uplink web site at www.uplink.com or by calling the activation assistance line at 888-987-5465.
2. Remove the transceiver and antenna from the box. Install the antenna on top of the transceiver. Do not over tighten the antenna. Antenna should be finger tight and thread may still be showing.
3. Determine an area you would like to place the unit. The area should be free from any metal objects or obstructions. Ensure the unit is above grade level.
4. Once the above steps are complete, attach a fresh 12v battery temporarily to the unit.
5. Allow the unit to power up. When the bottom LED is solid the unit is ready.
6. Observe signal strength of the unit. Middle LED
7. If signal strength is not satisfactory, check strength of the alternate carrier.
8. Set dipswitch one to the carrier with the best signal strength this will be the primary carrier. The other carrier will only be used if the primary is not available.

Wiring of the Unit





Bottom View of the 1500 **Side View of the 1500**

Wiring: The maximum wire size that the terminal block can handle is 18 AWG.

WARNING: Damage to the 1500 can occur if the upper supply voltage of 15.0 VDC is exceeded. A nominal 12 VDC power supply is recommended for this device.

Power Supply - Positive side of the 12 VDC power supply needs to be connected to the **12V** terminal and the ground to the negative terminal. The terminals are specified on the back of the unit. The current values are 80mA for standby and 1500mA for transmit (150ms transmit burst). A low DC signal will be sent if supply voltage is below 10.5 volts for more than 5 seconds.

Inputs -Below are the input configurations that can be used with 1550 and are DIP Switch selectable on the unit (Reference the **Configuring the Unit** portion of this manual).

1). Input 1 (mode selectable using dipswitches 3 & 4)

Bell Trip – This mode configures the unit to be tripped from a DC voltage ranging from 6VDC to 14VDC. The unit reads a pulsed voltage as a Fire signal and a steady voltage as a burglary signal.

Siren Trip – This mode configures the unit to be tripped from a Siren Driver or a Panel with a built in siren driver. The unit reads a steady tone as a fire signal and a yelping tone as a burglary signal. (Note: The input assumes that a speaker is connected to the panel. If you are not using a speaker we recommend using a Bell Trip instead of a Siren. This is a option on most panels.) The unit will not recognize a voice driver.

Pulse Counter – This mode configures the unit to count the number of times the unit has been tripped from a dry contact, DC voltage, or an open collector. The maximum frequency pulse is 40Hz. The count will be reported on request or every 12 hours.

2). Inputs 2 and 3

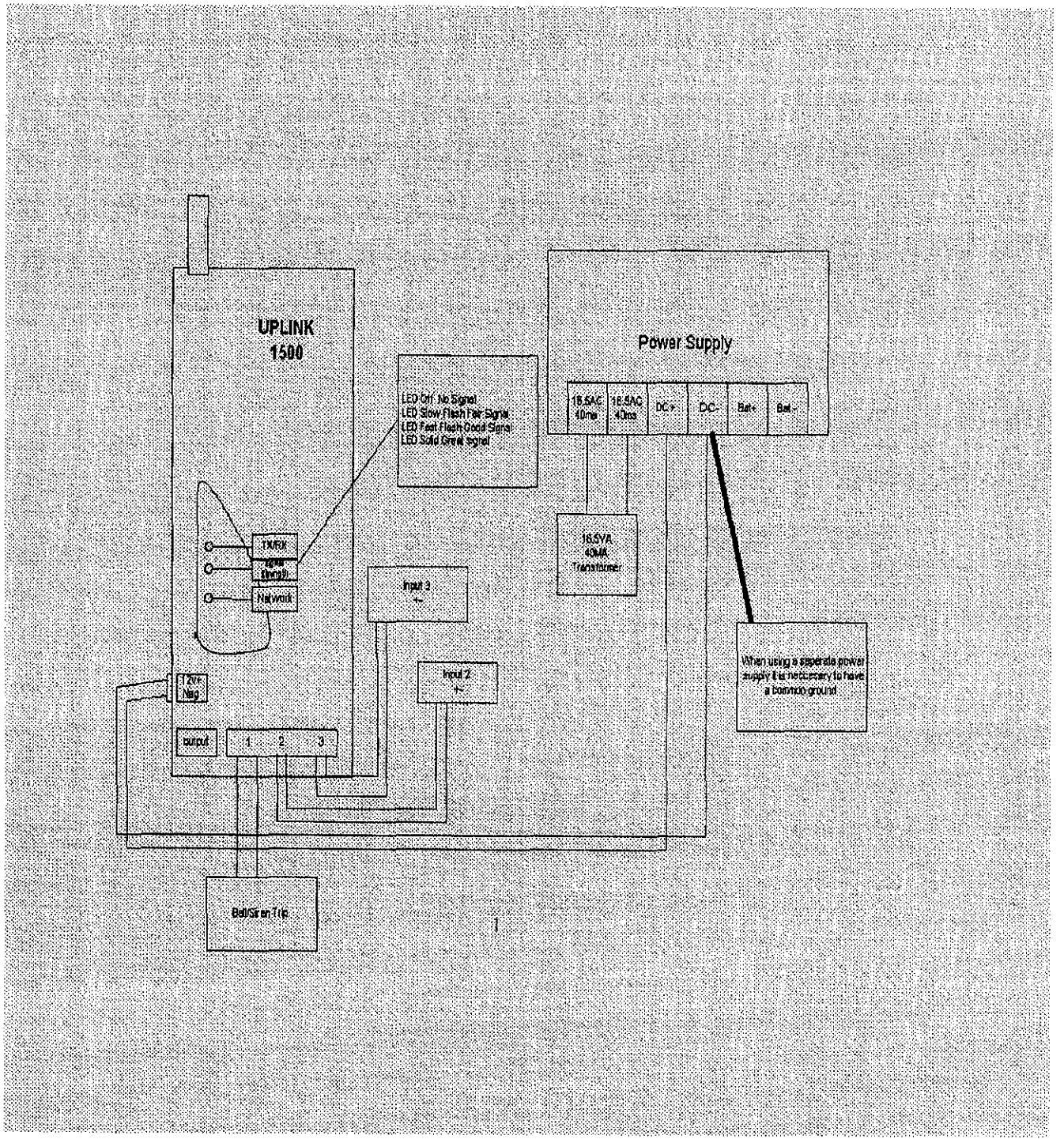
Voltage Trip – Inputs 2 and 3, and (1 if set for standard input) can be tripped by applying 12V to the + input and 12V tot the – input. A signal must be present for 500ms for an alarm to be sent.

Open Collector – Inputs 2 and 3, and (1 if set for standard input) can be tripped by applying 12V to the + input and the Open Collector output of the panel to the – input. The signal must be present for 500ms for an alarm to be sent.

Remote Control Output – Supply Voltage relay output. Output type controlled by dipswitch 7.

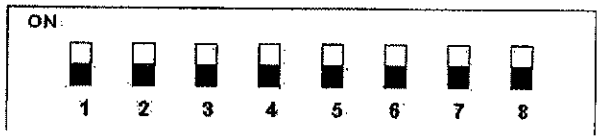
Trouble Output -The relay will remain closed as long as the unit has Power, Cellular Coverage, and a Cellemetry network.

Wiring Examples



Configuration of the Unit

The 1500 is configured through the use of a DIP Switch. The functionality of the individual DIP Switches is shown below:



Dipswitch Configuration Operating the Unit

Dip Switch Description

S1 Preferred Cellular System

Off = System A
ON = System B

S2 Pulse Count Auto Report Option

S3 Used in conjunction with S4

S4 Input Type 1

S3	S4	
Off	Off	Standard Input
Off	On	Pulse Counter
On	Off	Timed Bell
On	On	Sampled Siren

S5 Inputs Report Options

Off = Send Alarms Only
On = Send Alarms and Restorals

S6 Inputs Acknowledgement Option

Off = 1 way
On = 2 way (wait for page)

S7 Output Type

Off = Website Remote Control
On = Local Trouble Indicator
(No Cellular, Network, Comms)

S8 Test Option
Off = Weekly
On = Daily

Upon Initial Power up of the 1500 observe the LED's located on the front of the unit to determine the

following:

LED Usage

LED	Color		
1	Green	Power/Cellular Service/Cellemetry Network	
		ON	Solid if Powered
		Slow Blink	If Powered but no Cellular Service
		Fast Blink	If Powered but no Cellemetry Network Available
2	Green	Signal Strength	
		OFF	< = -100dBm
		Slow Blink	< = -90dBm
		Fast Blink	< = -80dBm
		On Solid	> -80dBm
3	Green	CMM Comms	Intermittent blink on transceiver communication Slow Blink if waiting for page Fast blink if registering

UPLINK Technical Support
1600 Parkwood Circle
Atlanta, GA 30339 1-888-9Uplink Fax 770-693-3501

For Customer Support Call 1-888-987-5465

1600 Parkwood Circle Suite 200 Atlanta, GA 30339 Phone: 770-693-5950 Fax: 770-693-5951 www.nmrx.com

Attachment C

Numerex Digital Migration Strategy Letter

Digital Migration

Background

The growth of mobile and M2M communications continues at a staggering pace. Gartner predicts that: "By 2007, there will be between 100 million and 160 million machine-to-machine connections worldwide that use wireless mobile phone networks." Forrester believes that: "Invisible mobile (mobile communication without human intervention) sessions will outnumber mobile sessions by a factor of more than 30 to one in 2020."

This growth, coupled with the business and technological developments in the cellular industry, has motivated cellular carriers to adopt new digital strategies. The cellular carriers are migrating their existing analog customers to new digital networks, CDMA, TDMA and GSM operating in two different frequency bands, 800MHz and 1.9 GHz.

As cellular carriers convert their analog service markets to their digital solution of choice, they are guided by the 2003 FCC ruling that requires carriers to maintain a sufficient level and quality of AMPS (analog) service in their coverage areas until February 18, 2008. While industry experts believe that AMPS will likely remain available well beyond this date, its ubiquitous availability is likely to decline in some metropolitan areas of the US after February 2008.

Numerex, the leader in wireless M2M telemetry solutions, has historically offered a variety of both fixed and mobile wireless solutions that utilize AMPS on our patented Cellemetry Network. The Cellemetry Network provides seamless, nearly ubiquitous AMPS coverage in over 99.5% of the United States cellular areas and 100% of the cellular service areas in Canada and Mexico. The Cellemetry Network is the dominant, M2M network solution provider in the US. We have accomplished this by partnering with over forty domestic and international cellular carriers.

Our current M2M applications and products are based on AMPS radios from a variety of industry leading manufacturers. These radios are the core of each product. Each day our units transmit over 500,000 customer messages across the control channel of the existing AMPS cellular network to our Cellemetry gateway.

The Numerex Position

Numerex has always focused on providing our customers with industry benchmark solutions that go well beyond control channel transport of machine messages. From comprehensive network management and quality of service to an M2M industry-leading array of wireless, analog, digital, IP and Internet solutions, Numerex has led the way. And now, with digital network migration well under way, it is more important than ever to provide the market and our customers with a clear migration path from legacy analog networks and services to the new digital networks and IP platforms. Our new back-end IP delivery and web management tools are clear examples of how we are again leading the way in the industry.

Maintaining our ubiquitous and redundant network coverage, continuing to develop industry leading applications and partnering with the best-in-class solution providers are key customer advantages on the Cellemetry Network today and important markers in our digital migration strategy for tomorrow.

Digital Strategy

Prudent integration of new digital and web technology into the Numerex wireless businesses is an active and continuing process and the company is committed to taking full advantage of such new technology whenever and where-ever it makes sense for our customers.

The Cellemetry Gateway currently supports both TDMA and CDMA switch technologies. It is our opinion that the CDMA protocol will continue to expand domestically, and Numerex is finalizing efforts on the integration of a Cellemetry digital CDMA radio into our products. These Cellemetry digital radios will operate on both the CDMA and AMPs networks to ensure continued ubiquitous, reliable coverage along with legacy protection.

Digital Cellemetry will also offer a wireless solution by combining existing analog and digital technologies into multi-mode/multi-band radios, allowing for maximum coverage and obsolescence protection. Digital Cellemetry offers the potential of symmetrical data payloads with more data per transmission than AMPS. This added feature will allow for faster and expanded end unit control. This strategy will also provide our customers a high level of flexibility for deployment not restricted by location or application. Numerex offers this choice in a logical, flexible, and cost-effective migration plan that maintains our current functionality, protects ours and our customers' investment, embraces the technology evolution, and provides a rich new array of wireless solutions. Initial units for testing are targeted for delivery in Q'2, 2005 with commercial release of Cellemetry digital products proposed for Q'2, 2005.

In parallel with our CDMA development initiative Numerex is sharply focused on providing a multi-protocol SMS offering that provides even wider bandwidth payloads. This SMS Telemetry functionality opens up new markets for those applications requiring larger telemetry bandwidth. Other major advantages of this supplemental offering are that unlike other data transport methods, Numerex's SMS implementation operates seamlessly across all of the new technologies (CDMA, TDMA and GSM). Development of SMS capability via GSM is already underway and targeted for testing in Q'2 2005

The Numerex wireless M2M business has focused on network and application technologies that have a proven record of coverage and performance as well as a clear migration path to future offerings. We believe that our proprietary and patent-pending digital and SMS solutions, coupled with current and future digital cellular, IP and web technologies, will continue to provide the M2M market with a vibrant suite of Numerex M2M solutions for the future.

Attachment D

Radio Design Group, Inc.
How It Works: Cellular Phones!

RADIO DESIGN GROUP, INC.

- How It Works! Index Page
- Cellular Phone Design Services
- Radio Design Group's Home Page

|| **CLICK HERE to go to our updated web presence** ||

How It Works: Cellular Phones!

There are two basic types of cellular phones: analog and digital. By far, the phone that most people (at least in the US) have been exposed to is the analog cellular phone. However, the digital phone is growing in terms of numbers in service, and any discussion of how cellular phones work would not be complete without covering all the bases.

Before we talk about how cellular phones work in general, let's talk about the difference between the types of cellular phones. We'll cover the main types, and then move on to how the cellular system works in general. This page is intended as a general overview, so we'll try not to get too technical here.

Analog & Digital Systems

AMPS: Advanced Mobile Phone Service.

AMPS is your plain vanilla analog cellular system. Voice signals are transmitted using an FM transmitter, just like a standard two way radio or music on your car FM radio would be. Signaling for call setup is done with digital signaling, but call supervision functions (on hook, off hook, hook flash, etc.) are done with various signaling tones. An important variation of this system is NAMPS, developed by Motorola. Similar to AMPS, but uses a narrower bandwidth channel and low speed digital signaling for call supervision.

TDMA: Time Division Multiple Access.

TDMA is one of the digital standards. The voice is digitized (much like a CD, but with much lower audio quality) and the resulting data is sent in bursts that are timed in such a way so as not to interfere with other stations using the same channel. An important variation of this system is GSM, formerly known as Groupe Special Mobile (French) but increasingly called Global System for Mobile telephones. GSM is a TDMA system, but also has frequency hopping and encryption features. While TDMA is primarily a North American standard, GSM, which originated in Europe, is rapidly being deployed

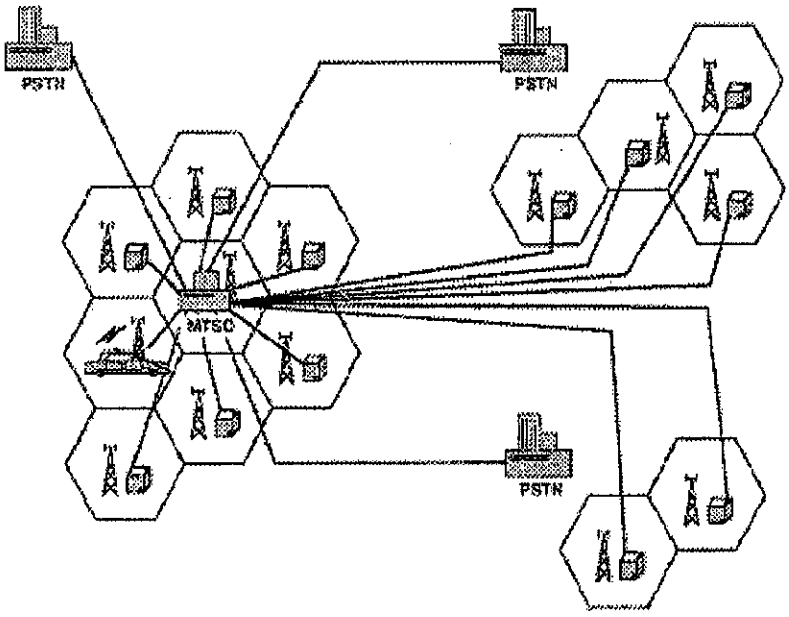
worldwide.

CDMA: Code Division Multiple Access.

CDMA is a form of spread spectrum transmission, where the digitized voice is combined with a special code that allows several users to share the same portion of the radio spectrum. The different codes allow the various signals to be sorted out at the receiving end. The current CDMA standard was developed by Qualcomm in San Diego.

The major advantage of digital service is increased capacity. Digital services can allow cellular carriers to increase the number of subscribers in a given situation by many times, depending on the system used and the individual circumstances. Other benefits include enhanced privacy from the addition of encryption, and reduction of cellular fraud.

Cellular Transmission



Cellular telephones get their name from the way the system is set up. Instead of one large base station covering a wide area, cellular systems are divided into many small coverage base station areas called "cells." As a subscriber moves from one cell to the next, the system "hands off" the call to the new cell from the old one. For example, as a mobile unit moves from downtown Los Angeles to Beverly Hills, he may get passed on (handed off) from the downtown LA cell to a Wilshire Blvd. cell, and then on to a West LA cell, and then to a Beverly Hills cell. The hand off is accomplished by sending a special signal to the mobile unit, which then switches to the new cell.

Why use multiple cells like this? The main reason is frequency re-use. The same channel can be used in more than one cell, as long as the cells don't overlap in their coverage area. This produces a much greater efficiency in channel use, allowing more calls in the system. If a single wide area base station were to be used, 100 channels could support 100 simultaneous calls. If we take that same 100 channels, and divide them up among 100 different cell sites, re-using channels as appropriate, we can support thousands of simultaneous calls; a substantial improvement!

It is the job of the Mobile Telephone Switching Office (MTSO) to make all the connections. The MTSO

is the bridge between the Public Switched Telephone Network (PSTN) and the cell sites that ultimately make the wireless connection to the subscriber's cellular phone. The MTSO not only makes the connections, but also controls all of the cell sites, and manages all of the mobiles via a control channel.

The control channel is used for several functions. Mobiles register with it, so that the system knows where to find them. The system calls mobiles with it, and mobiles initiate calls with it. Once the call is set up, then the mobile moves off to the specific voice channel (or time slot, or code) designated for that call by the system.

Simple, eh? Not hardly, but the cellular system has had many years of refinement to work on getting it right... and it does get it right, at least most of the time...


Return to Radio Design Group's Home Page

Last Modified: *January 4, 2001*

CERTIFICATE OF SERVICE

I, John A. Prendergast, hereby certify that a copy of the foregoing Opposition of AICC was served this 6th day of February, 2007, by hand delivery or by U.S. Mail, postage prepaid, to the following individuals at the addresses listed below, or by email as indicated:

Kevin J. Martin, Chairman
Federal Communications Commission
445 12th Street SW, Room 8-B201
Washington, DC 20554

Michael J. Copps, Commissioner
Federal Communications Commission
445 12th Street SW, Room 8-B115
Washington, DC 20554

Jonathan S. Adelstein, Commissioner
Federal Communications Commission
445 12th Street SW, Room 8-A302
Washington, DC 20554

Deborah Taylor Tate, Commissioner
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445 12th Street SW, Room 8-A204
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Robert M. McDowell, Commissioner
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Washington, DC 20554
fcc@bcpiweb.com

Signed: /s/
John A. Prendergast

Federal Communications Commission

The FCC Acknowledges Receipt of Comments From ...

Alarm Industry Communications Committee

...and Thank You for Your Comments

Your Confirmation Number is: '200726404755 '	
Date Received:	**Feb 6 2007**
Docket:	**01-108**
Number of Files Transmitted: 1	

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updated 12/11/03

Federal Communications Commission

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Alarm Industry Communications Committee

...and Thank You for Your Comments

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updated 12/11/03